UNITED STATES PATENT AND TRADEMARK OFFICE

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE **3** MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *26 January 2008*.

2a)☐ This action is **FINAL**.   2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-26* is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-26* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All b)☐ Some * c)☐ None of:

        1.☐ Certified copies of the priority documents have been received.

        2.☐ Certified copies of the priority documents have been received in Application No. _____.

        3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☒ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☐ Information Disclosure Statement(s) (PTO/SB/08)
    Paper No(s)/Mail Date _____.

4)☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____ .

5)☐ Notice of Informal Patent Application

6)☐ Other: _____.

DETAILED ACTION

1.   This is in response to Application filed 11/14/07.

2.   Claims 1 – 26 have been examined.

Claim Rejections - 35 USC § 103

3.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

4.   Claims 1 – 26 are rejected under 35 U.S.C. 103(a) as being unpatentable over

Hastings USPN 5,535,329 in view of Herbig US 5745675 A.

Regarding claims 1, 9 and 18, Hastings discloses, a method/computer readable

media for detecting and analyzing errors in a generic function call comprising:

providing a relation that includes sets of dummy arguments associated with the

generic function call (3:45 – 50);

first sorting through the relation to determine whether the generic function call

contains errors (3:40 – 45, see check for errors);

if the first sorting determines that the function call includes an error, second

sorting through the relation to determine a failure mode for the generic function call

(3:45 – 50, see error and violations)

and

providing an error message that identifies that the function call has an error and

provides information about the failure mode of the generic function call as determined

by the second sorting (3:45 – 50).

Hasting doesn't explicitly disclose the generic function call as disclosed in

Applicant's claimed invention. However, Herbig in an analogous art and similar

configuration discloses a default operation which provides generic functionality in a

diagnostic environment (9:1 – 5).

Therefore it would have been obvious to one of ordinary skill in the art at the time

the invention was made to combine Hastings and Herbig because it would enable

detecting errors in the generic code as suggested by Herbig above.

Regarding claim 2, the method of Claim 1 wherein the relation comprises a

generic function definition table (Hastings, FIG. 3, see table 20, and 30).

Regarding claim 3, the method of Claim 1 wherein the relation comprises a

matrix of argument signatures that relate the sets of dummy arguments with associated

specific functions for the generic function (Hastings10:50 – 64, see status array).

Regarding claim 4, the method of Claim 3 <u>wherein there generic function call</u>

<u>comprises at least one argument and (Herbig, 9:1 – 5)</u> the first sorting through the

relation comprises sorting and comparing each dummy argument of an argument

signature with the generic function call until a parameter mismatch is determined for the

dummy argument at which time the first sorting skips to a next argument signature and

continues sorting and comparing the generic function call with the dummy arguments of

the next argument signature <u>with the at least one argument</u> until all of the dummy

arguments of the relation are sorting and comparing <u>at least one argument of the</u>

<u>generic function</u> call (Hastings,12:20 – 30, see "If there is a not a match, the error

signaling routine continues" also 12:45 – 50).

Regarding claim 5, the method of Claim 3 wherein the second sorting through the

relation to determine the failure mode of the generic function call comprises:

identifying which parameters of the generic function call contain errors (Hastings,

3:27 – 40); and

wherein providing an error message comprises providing an error message that

identifies which parameters contain errors in the generic function call (Hastings,3:40 –

45).

Regarding claim 6, the method of Claim 5 wherein said second sorting further

comprises clarifying the nature of the error to determine a type of error present in the

parameter that contains errors (3:45 – 50, see array bound errors and violations); and

wherein providing an error message comprises providing an error message that identifies which parameter contains the error and the type of error (Hastings,3:45 – 50, see array bound violations and data errors).

Regarding claim 7, the method of Claim 6 wherein clarifying the nature of the error to determine a type of error present in the parameter includes determining that the type of error is at least one of a rank error, a type error, and a kind error (Hastings,3:45 – 50, see array bound violations and data errors).

Regarding claim 8, the method of Claim 3 wherein the second sorting determines which argument signature has the most correct format matches with the generic function call (Hastings,12:20 – 30);

and wherein a mismatched parameter in the argument signature having the most correct format matches is identified as a parameter containing an error (Hastings,12:20 – 30).

Regarding claim 10, the method of Claim 9 wherein determining whether the generic function call contains errors comprises:

providing a relation that defines the generic function call in terms of sets of dummy arguments comprising argument signatures representative of specific functions defined for the generic function call (Hastings,12:45 – 50);

first sorting through the relation to compare the generic function call with the

dummy arguments of the relation (Hastings,12:20 – 30, see "If there is a not a match,

the error signaling routine continues" also 12:45 – 50);

where the generic function call correctly matches a format for one of the

arguments signatures of the relation, the generic function call is deemed to have no

error (12:20 – 30, also 12:45 – 50);

where the generic function call does not correctly match a format for any of the

arguments signatures, the generic function call is deemed to have an error (12:20 – 30,

also 12:45 – 50);

wherein identifying the nature of the errors comprises:

recognizing that the first sorting has determined that an error is present in the

generic function call (11:50 – 60);

second sorting through the relation to determine if the failure mode in the generic

function call can be further clarified (3:45 – 50, see array bound violation, as interpreted

by Examiner);

and

wherein providing an error message comprises providing an error message that

includes information about the failure mode determined by the second sorting (3:45 –

50, see array bound violation, as interpreted by Examiner).

Regarding claim 11, the method of Claim 10 wherein the relation comprises a

generic function definition table (FIG. 3, see table 20, and 30).

Regarding claim 12, the method of Claim 10 wherein the relation comprises a

matrix of argument signatures that relate dummy arguments with associated specific

functions for the generic

function (10:50 – 64, see status array).

Regarding claim 13, the method of Claim 10 wherein the first sorting through the

relation comprises sorting and comparing each dummy argument of an argument

signature with the generic function call until a parameter mismatch is determined for the

dummy argument at which time the first sorting skips to a next argument signature and

continues sorting and comparing the generic function call with the dummy

arguments of the next argument signature until all of the dummy arguments of the

relation are sorted and compared with the generic function call (12:20 – 30, see "If there

is a not a match, the error signaling routine continues" also 12:45 – 50).

Regarding claim 14, the method of Claim 10 wherein the second sorting through

the relation to determine the failure mode of the generic function call comprises:

identifying which parameters of the generic function call contain errors(3:27 –

40); and

wherein providing an error message comprises providing an error message that

identifies which parameters contain errors in the generic function call (3:40 – 45).

Regarding claim 15, the method of Claim 14 wherein said second sorting further comprises clarifying the nature of the error to determine a type of error present in the parameter that contains errors(3:45 – 50, see array bound errors and violations); and

wherein providing an error message comprises providing an error message that identifies which parameter contains the error and the type of error (3:45 – 50, see array bound errors and violations).

Regarding claim 16, the method of Claim 15 wherein clarifying the nature of the error to determine a type of error present in the parameter includes determining that the type of error is at least one of a rank error, a type error, and a kind error (3:45 – 50, see array bound violations and data errors).

Regarding claim 17, the method of Claim 10 wherein the second sorting determines which argument signature has the most correct format matches with the generic function call (12:20 – 30); and

wherein a mismatched parameter in the argument signature having the most correct format matches is identified as a parameter containing an error (12:20 – 30).

Regarding claim 19, the computer readable media of Claim 18 wherein the code for determining whether the generic function call contains errors comprises:

computer code for providing a relation that defines the generic function call in terms of sets of dummy arguments configured as arguments signatures representative of specific functions defined for the generic function call (12:45 – 55);

computer code for first sorting through the relation to compare the generic function call with the dummy arguments of the relation (12:20 – 30, also see 12:45 – 55, for watch points);

where the generic function call correctly matches a format for one of the argument signatures, the generic function call is deemed to have no error (12:20 – 30, also see 12:45 – 55, for watch points);

where the generic function call fails to correctly match a format for any of the argument signatures, the generic function call is deemed to have an error (12:20 – 30, also see 12:45 – 55, for watch points);

wherein the computer code for identifying the nature of the errors comprises:

computer code for recognizing that the first sorting has determined that an error is present in the generic function call (3:45 – 50);

computer code for second sorting through the relation to determine if the failure mode in the generic function call can be further clarified (3:45 – 50, identifies an array bounds violation); and

wherein the computer code for providing an error message includes code for providing an error message that includes information about the failure mode determined by the second sorting (3:45 – 50, identifies an array bounds violation).

Regarding claim 20, the computer readable media of Claim 19 wherein the relation comprises a computer readable generic function definition table for the generic function call (FIG. 3, see table 20, and 30).

Regarding claim 21, the computer readable media of Claim 19 wherein the relation comprises a computer readable matrix of arguments signatures that relate sets of dummy arguments with associated specific functions for the generic function call (12:20 – 30, also see 12:45 – 55, for watch points).

Regarding claim 22, the computer readable media of Claim 19 wherein the computer code for first sorting through the relation comprises computer code for sorting and comparing the generic function call with the dummy arguments of each argument signature until a parameter mismatch is determined for a dummy argument of the signature at which time the computer code for first sorting skips to a next argument signature and continues sorting and comparing the generic function call with the next arguments signature until all of the argument signatures defined for the generic function call are sorted and compared with the generic function call (12:20 – 30, also see 12:45 – 55, for watch points).

Regarding claim 23, the computer readable media of Claim 19 wherein the computer code for second sorting through the relation to determine the failure mode of the generic function call comprises computer code for identifying which parameters of the generic   function call contain errors (3:27 – 40); and

wherein the computer code for providing an error message comprises computer code for providing an error message that identifies which parameters contain errors in the generic function call (3:45 – 50, identifies an array bounds violation).

Regarding claim 24, the computer readable media of Claim 23 wherein said computer code for second sorting further comprises computer code for clarifying the nature of the error to determine a type of error present in the parameter that contains errors (3:45 – 50, see array bound violations and data errors); and

wherein computer code for providing an error message comprises computer code for providing an error message that identifies which parameter contains the error and the type of error (3:45 – 50, see array bound violations and data errors).

Regarding claim 25, the computer readable media of Claim 24 wherein the computer code for clarifying the nature of the error to determine a type of error present in the parameter includes computer code for determining that the type of error is at least one of a rank

error, a type error, and a kind error (3:45 – 50, see array bound violations and data errors).

Regarding claim 26, the computer readable media of Claim 19 wherein the computer code for second sorting includes computer code for determining which argument signature has the most correct format matches with the generic function call;

wherein the computer readable media includes computer code for identifying the argument signature having the fewest mismatched parameters when compared with the generic function call (12:20 – 30, also 12:45 – 50);

wherein computer readable media includes computer readable code for identifying which parameters are mismatched and identifying those mismatched parameters as the parameters containing errors (12:20 – 30, also 12:45 – 50);and

wherein the computer code for providing an error message comprises computer code for providing an error message that identifies the mismatched parameter as a parameter that contains an error (12:20 – 30, also 12:45 – 50).

Response to Arguments

Applicant's arguments with respect to claims 1 – 26 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

5.   Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Chuck Kendall whose telephone number is 571-272-3698. The examiner can normally be reached on 10:00 am - 6:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tuan Dam can be reached on 571-272-3695. The fax phone number for the organization where this application or proceeding is assigned is **571-273-8300**.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/Chuck O.Kendall/

Primary Examiner, Art Unit 2192